

**We Claim:**

- 1) A compound for inserting into an organism, comprising: the compound having a disulfide bond that is labile under physiologic conditions selected from the group consisting of (a) a disulfide bond that is cleaved more rapidly than oxidized glutathione and (b) a disulfide bond constructed from thiols in which one of the constituent thiols has a lower pKa than glutathione and (c) a disulfide bond that is activated by intramolecular attack from a free thiol wherein the compound contains a transduction signal.
- 2) The compound of claim 1 wherein the transduction signal consists of Tat.
- 3) The compound of claim 1 wherein the transduction signal consists of VP22.
- 4) The compound of claim 1 wherein the transduction signal consists of ANTP.
- 5) The compound of claim 1 wherein the transduction signal consists of a polymer containing a cationic charge.
- 6) The compound of claim 5 claim 1 wherein the transduction signal consists of a peptide containing cationic residues.
- 7) A process for delivering a compound having a labile disulfide bond into a mammal, comprising:
  - a) forming the compound having a disulfide bond selected from the group consisting of (i) a disulfide bond that is cleaved more rapidly than oxidized glutathione, and (ii) a disulfide bond constructed from thiols in which one of the constituent thiols has a lower pKa than glutathione, and (iii) a disulfide bond that is activated by intramolecular attack from a free thiol;
  - b) attaching a transduction signal to the compound;
  - c) inserting the compound into the mammal; and,

- d) releasing the bond between the sulfur atoms in the disulfide.
- 8) The process of claim 7 wherein the transduction signal consists of Tat.
- 9) The process of claim 7 wherein the transduction signal consists of VP22.
- 10) The process of claim 7 wherein the transduction signal consists of ANTP.
- 11) The process of claim 7 wherein the transduction signal consists of a peptide containing a cationic charge.
- 12) The process of claim 11 wherein the transduction signal consists of a peptide containing cationic residues.
- 13) The compound of claim 1 wherein the compound consists of nucleic acids.